REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the arguments set forth fully below. In the Office Action mailed March 6, 2007, claims 1-20 have been rejected, and claim 1 has been objected to. In response, the Applicants have submitted the following remarks and amended claims 1, 6, 10, 15 and 20. Accordingly, claims 1-20 are still pending. Favorable reconsideration is respectfully requested in view of the amended claims and the remarks below.

Claim Objections

Within the Office Action, claim 1 has been objected to due to the informality of the last line reading "....outputting a signature pattern of the patent," and should read "...the patient." By the above amendment, the Applicants have amended claim 1 to correct this informality.

Rejections Under 35 U.S.C. §102

Claims 1-3 and 6-12 and 20 have been rejected under 35 U.S.C. §102 (e) as being anticipated by U.S. Patent No. 6,647,287 to Peel, III et al. (hereinafter Peel). The Applicants respectfully disagree with this rejection.

Peel teaches a method and system for reconstructing and verifying aortic blood pressure waveforms from peripheral blood pressure waveform data using mathematical models (Peel, abstract). Within the Office Action it is stated that Peel teaches acquiring continuous radial or ulner blood pressure with a tonometer or blood pressure sensor in an artery, and therefore, Peel teaches implant data as claimed in the present invention. However, one skilled in the art realizes that an indwelling blood pressure monitor is not an electronic cardiac implant, nor does such an indwelling blood pressure monitor render an electronic cardiac implant obvious.

An indwelling blood pressure sensor, as is known in the art, measures pressure and is specifically configured to measure pressure in the blood stream. An indwelling blood pressure sensor sits in the circulatory system, and does not have direct contact with the heart nor does it record cardiac data.

Conversely, an electronic cardiac implant measures electrical activity of the heart, and in some cases delivers electrical energy to the heart. A common electronic cardiac implant, as is known in the art, includes lead wires that actually touch the heart.

In contrast to the teachings of Peel, the system and method of the present invention includes an electronic cardiac implant that is configured to measure electrical activity of the heart, i.e., implant data, and synchronized and correlate that data with non-implant data, as described and claimed in the present invention.

The bodies of the independent claims 1, 6, 10, 15 and 20 have been amended to clarify that the implant cardiac data is obtained from the electronic cardiac implant, which as described above, is not analogous to an indwelling blood pressure sensor. The Peel reference does not teach an electronic cardiac implant, nor implant cardiac data.

Claim 1 is directed to a method of analyzing cardiac data acquired from a patient having an electronic cardiac implant, the method comprising acquiring non-implant cardiac data from the patient, acquiring implant cardiac data from the electronic cardiac implant, synchronizing the non-implant cardiac data and the implant cardiac data, correlating the non-implant cardiac data with the implant cardiac data to determine a cardiac condition of the patient, wherein the correlating step is carried out with a correlating algorithm, and outputting a signature pattern of the patient. As described above, Peel does not teach an electronic cardiac implant and following, does not teach collecting implant data from the same. For at least these reasons, the independent claim 1 is allowable over the teachings of Peel.

The Applicants respectfully submit that the independent claims 6, 10 and 20 also include the limitations of an electronic cardiac implant, that as described above, is not taught in the Peel reference. For at least these reasons, the independent claim 6, 10 and 20 are also allowable over Peel.

Claims 2 and 3 are dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Peel. Accordingly, claims 2 and 3 are also allowable as being dependent upon an allowable base claim.

Claims 7-9 are dependent upon the independent claim 6. As discussed above, the independent claim 6 is allowable over the teachings of Peel. Accordingly, claims 7-9 are also allowable as being dependent upon an allowable base claim.

Claims 11 and 12 are dependent upon the independent claim 10. as discussed above, the independent claim 10 is allowable over the teachings of Peel. Accordingly, claims 11 and 12 are also allowable as being dependent upon an allowable base claim.

Claims 15, 16 and 19 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,948,005 to Valikai et al. (hereinafter Valikai). The Applicants respectfully disagree with this rejection.

Within the Office Action, it is stated that the Valikai reference teaches that in addition to an implantable device, that a receiving unit also acquires data from a physiological sensor which is taught in column 6, lines 17-32. The Office Action goes on to state that the physiological sensor is disclosed as being coupled either within the pacemaker or just coupled outside the pacemaker in column 5, lines 32-39, and that the physiological sensor either way senses data such as physical activity, respiration rate, or blood oxygen level which the Examiner construes as non-implant cardiac data. However, a careful read of the Valikai reference at column 5, lines 30-42, while referencing Figure 1, indicates that the physiological sensor 26 may or may not be included with the implantable pace maker 16. While the reference indicates that the physiological sensor 26 is optional, the reference does not teach that the physiological sensor 26 is not implanted with the pace maker, either thereto or included within the pacemaker 16. One skilled in the art realizes that such optional physiological sensors are also implanted with the pacemaker, either included within the pacemaker, or alternatively connected thereto, yet implanted.

In contrast to the teachings of Valikai, the system and method of the present invention includes an electronic cardiac implant as well as a non-implant device for collecting non-implant cardiac data from the patient.

Claim 15 is directed to a patient monitoring system for analyzing cardiac data acquired from a patient having an electronic cardiac implant, the system comprising: a transmitter that generates a polling signal, a receiver that receives implant data when the implant responds to the polling signal, and a computer-readable medium encoded with a software program, the software program sets forth rules for: a data acquisition module that acquires implant cardiac data from the electronic cardiac implant and non-implant cardiac data from the patient, and an analysis module that correlates the implant cardiac data and the non-implant cardiac data and generates a signature pattern from the correlation. As described above, Valikai does not teach a data acquisition module that acquires non-implant cardiac data from the patient. For at least these reasons, the independent claim 15 is allowable over the teachings of Valikai.

Claims 16 and 19 are dependent upon the independent claim 15. As discussed above, the independent claim 15 is allowable over the teachings of Valikai. Accordingly, claims 16 and 19 are also allowable as being dependent upon an allowable base claim.

Rejections Under 35 U.S.C. §103

Claims 4 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Peel as applied to claims 1 and 10, in further view of U.S. Publication No. 2005/0103351 to Stomberg et al. (hereinafter Stomberg). Claims 4 and 13 are dependent upon the independent claims 1 and 10. As discussed above, the independent claims 1 and 10 are allowable over the teachings of Peel. Accordingly, claims 4 and 13 are also allowable as being dependent upon an allowable base claim.

Claims 5 and 14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Peel as applied to claims 1 and 10, in view of U.S. Patent No. 4,616,333 to Shimoni (hereinafter Shimoni). Claims 5 and 14 are dependent upon the independent claims 1 and 10. As discussed above, the independent claims 1 and 10 are allowable over the teachings of Peel. Accordingly, claims 5 and 14 are also allowable as being dependent upon an allowable base claim.

Claim 17 and 18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Valikai as applied to claim 15, in further view of U.S. Publication No. 2002/0099302 to Bardy (hereinafter Bardy). Claims 17 and 18 are dependent upon the independent claim 15. As discussed above, the independent claim 15 is allowable over the teachings of Valikai. Accordingly, claims 17 and 18 are also allowable as being dependent upon an allowable base claim.

For these reasons, Applicants respectfully submit that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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